Amendments to the Claims

1. (canceled)

2. (previously presented) A telephone, comprising:

a down-converter, comprising:

at least one first switch that sub-samples and transfers energy from a received radio frequency input signal;

a storage device coupled to said at least one first switch that stores the transferred energy, wherein said at least one first switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, wherein a lower frequency signal is generated from the stored energy; and

a control signal generator coupled to said at least one first switch; and

an up-converter comprising at least one second switch coupled to a bias signal and a control signal.

3. (previously presented) The telephone of claim 2, wherein said telephone is a cordless telephone.

4. (previously presented) The telephone of claim 2, wherein said telephone is a cellular telephone.

5. (previously presented) The telephone of claim 2, wherein said telephone is a satellite telephone.

6. (previously presented) The telephone of claim 2, wherein said down-converter and said up-converter form part of a transceiver.

7. (canceled)

8. (previously presented) An interface for enabling communication with a data communication network, comprising:

a down-converter, comprising:

at least one first switch that sub-samples and transfers energy from a received radio frequency input signal;

a storage device coupled to said at least one first switch that stores the transferred energy, wherein said at least one first switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, wherein a lower frequency signal is generated from the stored energy; and

a control signal generator coupled to said at least one first switch; and

an up-converter comprising at least one second switch coupled to a bias signal and a control signal.

9. (previously presented) The interface of claim 8, wherein said down-converter and said up-converter form part of a transceiver.

10. (canceled)

11. (previously presented) The interface of claim 8, wherein said interface is implemented using one or more integrated circuits.

12. (previously presented) The interface of claim 8, wherein said data communication network is a local area network (LAN).

13. (previously presented) The interface of claim 12, wherein said down-converter operates over wireless links, such that said data communication network is a wireless local area network (WLAN).

14. (previously presented) The interface of claim 8, wherein said data communication network is a wide area network (WAN).

15. (previously presented) The interface of claim 14, wherein said down-converter operates over wireless links, such that said data communication network is a wireless wide area network (WWAN).

16. (previously presented) A computer, comprising:

an interface to communicate over a data communication network, said interface including a down-converter and an up-converter, wherein said down-converter comprises:

at least one first switch that sub-samples and transfers energy from a received radio frequency input signal;

a storage device coupled to said at least one first switch that stores the transferred energy, wherein said at least one first switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, wherein a lower frequency signal is generated from the stored energy; and

a control signal generator coupled to said at least one first switch; and

wherein said up-converter comprises at least one second switch coupled to a bias signal and a control signal.

17. (previously presented) The computer of claim 16, wherein said down-converter and said up-converter form part of a transceiver.

18. (canceled)

19. (previously presented) The computer of claim 16, wherein said interface is implemented using one or more integrated circuits.

20. (previously presented) The computer of claim 16, wherein said data communication network is a local area network (LAN).

21. (previously presented) The computer of claim 20, wherein said down-converter operates over wireless links, such that said data communication network is a wireless local area network (WLAN).

22. (previously presented) The computer of claim 16, wherein said data communication network is a wide area network (WAN).

23. (previously presented) The computer of claim 22, wherein said down-converter operates over wireless links, such that said data communication network is a wireless wide area network (WWAN).

24. (previously presented) A data communication network, comprising:

one or more data processing devices each comprising at least one interface for enabling communication therebetween, said interface including a down-converter and an up-converter, wherein said down-converter comprises:

at least one first switch that sub-samples and transfers energy from a received radio frequency signal;

a storage device coupled to said at least one first switch that stores the transferred energy, wherein said at least one first switch and said storage device operate according to control signal apertures such that energy is integrated over said control

signal apertures, wherein a lower frequency signal is generated from the stored energy; and

a control signal generator coupled to said at least one first switch; and

wherein said up-converter comprises at least one second switch coupled to a bias signal and a control signal.

25. (previously presented) The data communication network of claim 24, wherein said down-converter and said up-converter form part of a transceiver.

26. (canceled)

27. (previously presented) The data communication network of claim 24, wherein said interface is implemented using one or more integrated circuits.

28. (previously presented) The data communication network of claim 24, wherein said data communication network is a local area network (LAN).

29. (previously presented) The data communication network of claim 28, wherein said down-converter operates over wireless links, such that said data communication network is a wireless local area network (WLAN).

30. (previously presented) The data communication network of claim 24, wherein said data communication network is a wide area network (WAN).

31. (previously presented) The data communication network of claim 30, wherein said down-converter operates over wireless links, such that said data communication network is a wireless wide area network (WWAN).

32. (previously presented) A method for communication in a telephone, comprising the steps of:

(1) receiving a first communication signal;

(2) down-converting said first communication signal to generate a second communication signal, said second communication signal having a lower frequency than said first communication signal, using at least one sub-sampling switch, a storage device coupled to said at least one sub-sampling switch to store energy from the sub-sampling switch, wherein said at least one sub-sampling switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, said second communication signal generated from the stored energy, and a control signal generator coupled to said at least one sub-sampling switch; and

(3) up-converting a third signal to generate a fourth signal, using at least one second switch coupled to a bias signal and a control signal.

33. (previously presented) The method of claim 32, wherein said telephone is a cordless telephone.

34. (previously presented) The method of claim 32, wherein said telephone is a cellular telephone.

35. (previously presented) The method of claim 32, wherein said telephone is a satellite telephone.

36-46. (canceled)

47. (previously presented) The interface of claim 8, wherein said interface is a wireless local area network (WLAN) interface module.

48. (previously presented) The interface of claim 8, wherein said interface is a wireless local area network (WLAN) router.

49. (previously presented) The computer of claim 16, wherein said interface is a wireless local area network (WLAN) interface module.

50. (previously presented) The computer of claim 16, wherein said interface is a wireless local area network (WLAN) router.

51. (previously presented) The data communication network of claim 24, wherein said interface is a wireless local area network (WLAN) interface module.

52. (previously presented) The data communication network of claim 24, wherein said interface is a wireless local area network (WLAN) router.

53. (new) A method for communication in a network, comprising the steps of:

(1) receiving a first communication signal;

(2) down-converting said first communication signal to generate a second communication signal, said second communication signal having a lower frequency than said first communication signal, using at least one sub-sampling switch, a storage device coupled to said at least one sub-sampling switch to store energy from the sub-sampling switch, wherein said at least one sub-sampling switch and said storage device operate according to control signal apertures such that energy is integrated over said control signal apertures, said second communication signal generated from the stored energy, and a control signal generator coupled to said at least one sub-sampling switch; and

(3) up-converting a third signal to generate a fourth signal, using at least one second switch coupled to a bias signal and a control signal.

54. (new) The method of claim 53, wherein the network is a wireless local area network (WLAN).